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39. (Presently amended) The method of claim 38 wherein said analysis step is performed on a solid phase, ~~said solid phase being~~ selected from the group consisting of a tissue section, a tissue sample in a microarray, a sample bound to a chip, and a sample bound to a membrane.

Cancel claim 40.

45. (Presently amended) The method of claim 38 wherein said method is performed on a solid phase, ~~membrane, microarray or DNA chip and wherein one or more ultrasound transducers are used~~ and uses one or more ultrasound transducers to produce an ultrasound field that allows at least a portion of said solid phase to receive a uniform frequency and intensity of ultrasound.

48. The method of claim 38 ~~45~~ wherein said ~~method is performed on a sample solid phase comprises~~ a tissue section or a sample bound to a membrane.

53. The method of claim 48 ~~38~~ wherein a range of ultrasound frequencies is applied to said sample.

54. The method of claim 48 ~~45~~ wherein said ~~method is performed on a solid phase, membrane, microarray or DNA chip and wherein~~ a plurality of transducers are arranged around said solid phase, ~~membrane, microarray or DNA chip~~ in a two-dimensional arrangement.

55. The method of claim 48 ~~45~~ wherein said ~~method is performed on a solid phase, membrane, microarray or DNA chip and wherein~~ a plurality of transducers are arranged around said solid phase, ~~membrane, microarray or DNA chip~~ in a three dimensional arrangement.

56. The method of claim 48 ~~45~~ wherein said ~~method is performed on a solid phase, membrane, microarray or DNA chip and wherein~~ said solid phase, ~~membrane, microarray or DNA chip~~ is rotated.

57. The method of claim 48 ~~45~~ wherein said ~~method is performed on a solid phase, membrane, microarray or DNA chip and wherein~~ said transducer revolves around said solid phase, ~~membrane, microarray or DNA chip~~.